

10/534,077

Attorney Docket Number NL 021136

Response to Office Action of January 11, 2006

Via facsimile 571-273-8300

Date of Deposit: April 7, 2006

Remarks**BEST AVAILABLE COPY**

Claims 1, 7 and 8 are here amended. Support for amendment to claim 1 is found on page 6, lines 21-23. Claims 7 and 8 are here amended to incorporate the subject matter of claim 1 and any intervening claims. Support for these amendments is found in claims 1, 7 and 8 as originally filed and here amended.

Claims 1-8 remain pending in the application. No new matter has been added, and no new material presented that would necessitate an additional search on the part of the Examiner.

Issues under 35 U.S.C. §102(b)

The Office Action on page 2, ¶3 rejects claims 1-6 as being anticipated by Buchroeder (U.S. Patent Number 4,278,330, issued July 14, 1981).

Prior to analyzing the art cited in the Office Action, Applicants believe that a brief description of the subject matter of independent claim 1 would be of use to the Examiner.

Claim 1 as here amended is directed to a zoom lens with a front lens group and a controllable lens group. The controllable lens group has two lens elements which are made of different lens materials and are movable with respect to each other for focusing the zoom lens without displacing the front lens group.

Applicants below characterize the subject matter in Buchroeder and show that this reference is not the same as claim 1.

Buchroeder, U.S. Patent Number 4,278,330, issued July 14, 1981

Buchroeder shows a zoom optical system for obtaining a moderate to large aperture

10/534,077

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and high speed while maintaining broad spectral image correction. See Buchroeder, column 1, lines 8-13.

Buchroeder's zoom system comprises two moving element groups that are widely spaced from each other, with at least one intermediate fixed lens between the two movable groups. Ibid., column 2, lines 56-60. Buchroeder uses widely spaced lengths for S₄, which is the separation between element III of the first lens group and element IV, a stationary lens which is a fixed distance from element III. Ibid., Figs. 4, 5, 7 and 9. The length in Buchroeder's zoom system of S₄ is 230.20 to 508.00 millimeters, which is about 9 inches and 20 inches, respectively. Ibid., Figs. 4, 5, 7 and 9.

Most importantly, Buchroeder shows three lens groups. Figure 4 of Buchroeder cited in the Office Action shows one element (labeled in Figure 4 as I) of a first lens group (labeled as I, II, and III) and a second lens group (labeled as V, VI and VII), with a third lens (labeled as IV) that remains stationary and is located between the first and second lens group. See Buchroeder, column 3, lines 58-60 and Fig. 4. Element I of the first lens group moves with respect to the entire second lens group.

The present claims are not the same as the cited art

The legal standard for rejection of a claim under 35 U.S.C. §102 is identity.

Claim 1 is directed to a zoom lens with a front lens group and a controllable lens group. The controllable lens group has two lens elements which are made of different lens materials and are movable with respect to each other for focusing the zoom lens without displacing the front lens group.

10/534,077

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Buchroeder fails to show a controllable lens group with two lens elements that are movable with respect to each other. Further, Figure 4 shows that two elements (II and III) of Buchroeder's first lens group do not move with respect to each other. This is clearly indicated in Figure 4 of Buchroeder, which shows that Elements II and III are connected, with no separation between them. There is no "S" or distance between them in Fig. 4 or anywhere else in Buchroeder. See Buchroeder, Fig. 4.

Buchroeder's groups of lenses and their movement with respect to each other are not the same as claims 1-6 as here amended.

Nevertheless claim 1 is here amended, and now includes subject matter that clarifies that during focusing, the front lens group is not displaced.

As the subject matter of claim 1 is not the same as Buchroeder, this claim is not anticipated by Buchroeder. Further, as claims 2-6 depend directly or indirectly from claim 1, and include all of the subject matter of claim 1, therefore claims 1-6 are novel with respect to the cited reference.

Applicants assert that claims 1-6 comply with 35 U.S.C. §102(b), and respectfully request that this rejection be withdrawn.

Issues under 35 U.S.C. §103(a)

The Office Action on page 4, ¶4 rejects claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable over Buchroeder (U.S. Patent Number 4,278,330, issued July 14, 1981) in view of Jo et al. (U.S. Patent Number 6,844,989, issued January 18, 2005). Buchroeder is characterized above.

10/534,077

Response to Office Action of January 11, 2006

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Attorney Docket Number NL 021136

Claims 7 and 8 are here amended to independent form and incorporate all of the subject matter of claim 1.

Claim 7 as here amended is directed to a camera comprising a zoom lens with a front lens group and a controllable lens group. The controllable lens group has two lens elements which are made of different lens materials and are movable with respect to each other for focusing the zoom lens without displacing the front lens group.

Claim 8 as here amended is directed to a hand-held apparatus with input means, information processing means, display means, and a camera. The camera has a zoom lens with a front lens group and a controllable lens group, and the controllable lens group has two lens elements which are made of different lens materials and are movable with respect to each other for focusing the zoom lens without displacing the front lens group.

Jo et al., U.S. Patent Number 6,844,989, issued January 18, 2005

Jo et al. shows a lens system installed in a mobile communication terminal. See Jo et al., column 1, lines 8-9. The lens system is comprised of a first lens, a perforated iris separated from the first lens by a designated distance, i.e. a constant distance, a second lens separated from the perforated iris by a designated distance, and a third lens separated from the second lens by a designated distance. Ibid., column 3, lines 7-15. There is no basis in Jo et al. for a zoom system that has lenses that move with respect to each other.

Jo et al. fails to cure the defects of Buchroeder, because Jo et al. fails to show a zoom optical system. Jo et al. fails to show any lens elements that are movable with respect to each other. Jo et al. also fails to show lens elements made of different lens materials. In fact all of the lenses in Jo et al. are made of one material, plastic. Ibid., claim 3, 5 and 7.

10/534,077

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Buchroeder fails to disclose a camera, as admitted by the Office Action on page 4, ¶4. In fact Buchroeder's lengths for S₄, the separation between elements III and IV, of 230.20 to 508.00 millimeters (more than half a meter). See Buchroeder, Figs. 4, 5, 7 and 9.

These distances are unsuitable for a camera, which is the subject matter of claim 7, or hand held apparatus including a camera, which is the subject matter of claim 8. In fact, Buchroeder describes a telescope. See Buchroeder, column 2, lines 49-51 and 63-66.

Jo et al., published 24 years after Buchroeder, fails to cite Buchroeder, and fails to teach or suggest any modification of Buchroeder, for example, a modification that would render Buchroeder sufficiently miniature, let alone teach that the combination and the modification would be successful in obtaining the subject matter of the present claims.

As Jo et al. fails to cure the defects of Buchroeder with respect to the present pending claims, therefore claims 7 and 8 are not obvious in view of Buchroeder and Jo et al., alone or in combination.

Nevertheless, claims 7 and 8 are here amended to incorporate all of the limitations of claim 1. As claim 1 contains subject matter not rejected under 35 U.S.C. §103, therefore claims 7 and 8 as here amended are not obvious for this reason also.

For any of these reasons, Applicants assert that the present claims comply with 35 U.S.C. §103(a), and respectfully request that rejection of claims 7 and 8 under 35 U.S.C. §103(a) be withdrawn.

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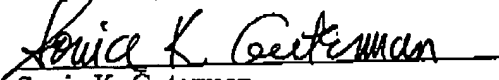
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Summary

On the basis of the foregoing reasons, Applicants respectfully submit that the pending claims are in condition for allowance, which is respectfully requested.

If there are any questions regarding these remarks, the Examiners are invited and encouraged to contact Applicants' representative at the telephone number provided.

Respectfully submitted,



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